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(54) **Device for storing nozzles for a vacuum cleaner**

(57) This invention relates to a device for storing for a vacuum cleaner comprising a tube handle (12) to which a tube shaft (13) with a floor nozzle (14) can be applied. The tube handle (12) is attached to a vacuum cleaner hose (11) which is connected to a vacuum cleaner body. The device comprises a holder (15) with fastening means (28,29,37,38) for several accessories (27,34,39) the holder being placed on or in close vicinity of the tube handle (12).

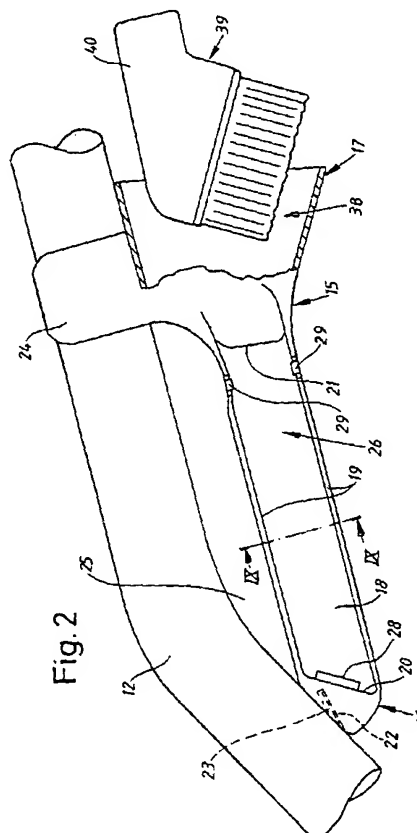


Fig. 2

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D e s c r i p t i o n

This invention relates to a device for storing nozzles for a vacuum cleaner having a tube handle to which a tube shaft with a floor nozzle can be applied and which is attached to a vacuum cleaner hose which is connected to a vacuum cleaner body.

When using this type of vacuum cleaner it is common that the accessories, such as small nozzles, which are temporarily used during the cleaning operation, are stored on or within the vacuum cleaner shell in order to be accessible without it being necessary for the operator to move too far away from the vacuum cleaner. Shifting the nozzle is nevertheless troublesome for many people, in particular for elderly people, since the vacuum cleaner shell is mainly at the same level as the floor level which means that the handler has to bend to reach the nozzles.

It is also previously known to store a brush nozzle on a hook arranged on the tube shaft when using said type of vacuum cleaners which means that this detail is easily accessible but also in this case the other details have to be stored on the vacuum cleaner shell or separated from the vacuum cleaner.

The purpose of this invention is to eliminate the disadvantages mentioned above and to create a device which makes it possible to comfortably store and use all the small nozzles belonging to the vacuum cleaner.

An embodiment of the invention will now be described with reference to the accompanying drawings on which Fig. 1 shows a vacuum cleaner which is provided with a device according to the invention, Fig. 2 shows one side of the device in an enlarged scale and in a partly broken view with a brush nozzle accessory, Fig. 3 shows the opposite side of the device, Fig. 4 shows a tube nozzle which is placed on one side of the device, Fig. 5 and 6 resp. show sections on the lines V-V and VI-VI in Fig. 4, Fig. 7 shows a textile nozzle which is fixed on the other side, Fig. 8 shows a section on the line VIII-VIII in Fig. 7 and Fig. 9 shows a section on the line IX-IX in Fig. 2.

Fig. 1 shows a vacuum cleaner having a vacuum cleaner body 10 with a conventional fan unit and a dust bag, not shown. One end of a hose 11 is connected to the body and the opposite end of the hose is provided with a tube handle 12 which as usual can be connected to a tube shaft 13 supporting a vacuum cleaner nozzle 14. The tube handle is provided with a holder 15 whose purpose will be explained below.

The holder 15 comprises a front and a rear part 16, 17. The front part is shaped as an elongated plate 18 having side wall portions 19 and front and rear wall portions 20, 21 whereas the rear part 17 is cup shaped. The free end of the front part 16 is provided with a recess 22 with which a hook 23 arranged on the tube handle cooperates. The rear part 17 has an arc shaped elastic fastening means 24 which can be snapped on the tube handle 12 or on the sleeve which normally connects the

hose with the tube handle. By entering the recess 22 on the hook 23 and snapping the fastening means 24 on the tube handle 12 the holder can temporarily be fixed on the tube handle. This means that an opening 25 is created between the tube handle and the holder into which opening the handler can put his hand and as usual grip the tube handle.

On one side of the front part 16 of the holder 15 there is a first pocket 26 in which a tube nozzle 27 can be inserted and secured. The pocket 26 defined by the plate 18, the wall portions 19, 20 and 21 is provided with a shoulder 28 arranged on the front wall portion 20 and with resilient tongues 29 arranged at the wall portions 19. The tube nozzle 27 is shaped as a pipe and has a front portion 30 with a mainly rectangular section and a rear portion 31 with a circular section, the diameter of the rear portion being smaller than the inner diameter of the tube handle so that the nozzle partly can be inserted into the tube handle when the tube shaft has been removed. The tube nozzle also has knobs 32 preventing the nozzle from being moved to far into the tube handle. The tube nozzle is fixed in the pocket 26 by first entering the front portion 30 on the shoulder 28 after which the nozzle is pressed towards the plate 18. This means that the tongues 29 are flexed outwardly to partly surround the rear portion 32 of the nozzle so that it is kept in the pocket. In order to pick out the nozzle it is pulled outwards from the plate 18.

On the opposite side of the front part 16 of the holder 15 there is a second pocket 33 which is also defined by the plate 18 and the wall portions 19, 20 and 21. In this pocket a textile nozzle 34 can be stored. The textile nozzle 34 has an elongated air inlet opening 35 which is connected to a connection tube 36 to which the tube handle 12 can be connected. The outer diameter of the connection tube 36 is also in this case somewhat smaller than the inner diameter of the tube handle 12 which means that the parts can be fixed to each other by friction engagement. In order to secure the nozzle 34 in the pocket 35 the nozzle is pressed, with its air inlet opening 35 faced towards the plate 18, towards the plate which means that beads 37 arranged at the side wall portions will snap in behind the nozzle keeping it in the pocket. In order to remove the nozzle it is moved in the opposite direction.

The rear part 17 of the holder 15 is, as has been mentioned before, cup shaped and forms a third pocket 38 into which a brush nozzle 39 can be inserted and by friction engagement be retained in the pocket. Also the connection tube 40 to this brush nozzle has an outer diameter which is less than the inner diameter of the tube handle 12 so that it can be retained by friction engagement.

By means of the suggested arrangement it is possible to have several accessories easily accessible during the cleaning operation at the same time as it is possible to remove the holder with all the nozzles from the tube handle if this should be desirable. Since the con-

necting parts of the nozzles have a small outer diameter the overall dimensions of the are much smaller than conventional nozzles. Preferably the holder as well as the nozzles are made from plastics.

It should be mentioned that the device according to the invention can also be used for stationary vacuum cleaners i.e. such vacuum cleaners where the fan unit via permanent pipe installations is connected to several sockets to which a vacuum cleaner hose can be connected.

Claims

1. Device for storing nozzles for a vacuum cleaner comprising a tube handle (12) to which a tube shaft (13) with a floor nozzle (14) can be applied and which is attached to a vacuum cleaner hose (11) which is connected to a vacuum cleaner body, **characterized in** that the device comprises a holder (15) with fastening means (28,29,37,38) for several accessories (27,34,39) the holder being placed on or in close vicinity of the tube handle (12). 15 20
2. Device according to claim 1, **characterized in** that the holder (15) is placed mainly below the tube handle (12). 25
3. Device according to claim 1 or 2, **characterized in** that the holder (15) has such an extension seen in the sideways direction that it does not considerably extend the extension of the tube handle (12) in the same direction. 30
4. Device according to any of claims 1-3, **characterized in** that the connecting part (31,36,40) of at least some of the accessories (27,34,39) have a smaller outer diameter than the inner diameter of the tube handle (12). 35 40
5. Device according to any of the previous claims, **characterized in** that the holder (15) comprises an elongated, first part (16) on which the fastening means (28,29,37) are placed such that the accessories can be secured at least at two sides of the part. 45
6. Device according to claim 6, **characterized in** that the first part (16) comprises two pockets (26,33) placed at each side of an intermediate plate (18). 50
7. Device according to claim 5 or 6, **characterized in** that the holder also comprises a second part (17) which is shaped as a pocket (38) in which a brush nozzle is inserted and is retained by friction engagement. 55
8. Device according to any of the preceding claims, **characterized in** that the holder (15) is removably secured on the tube handle (12). 9. Device according to claim 8, **characterized in** that the holder (15) is secured on the tube handle (12) at its front and rear part (16 and 17 resp) and that there is a free area (25) between these parts serving as a grip for the tube handle (12).

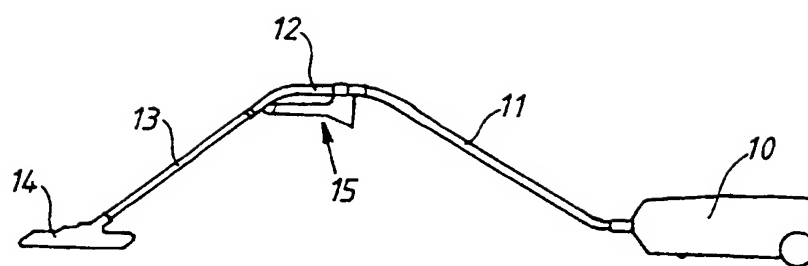
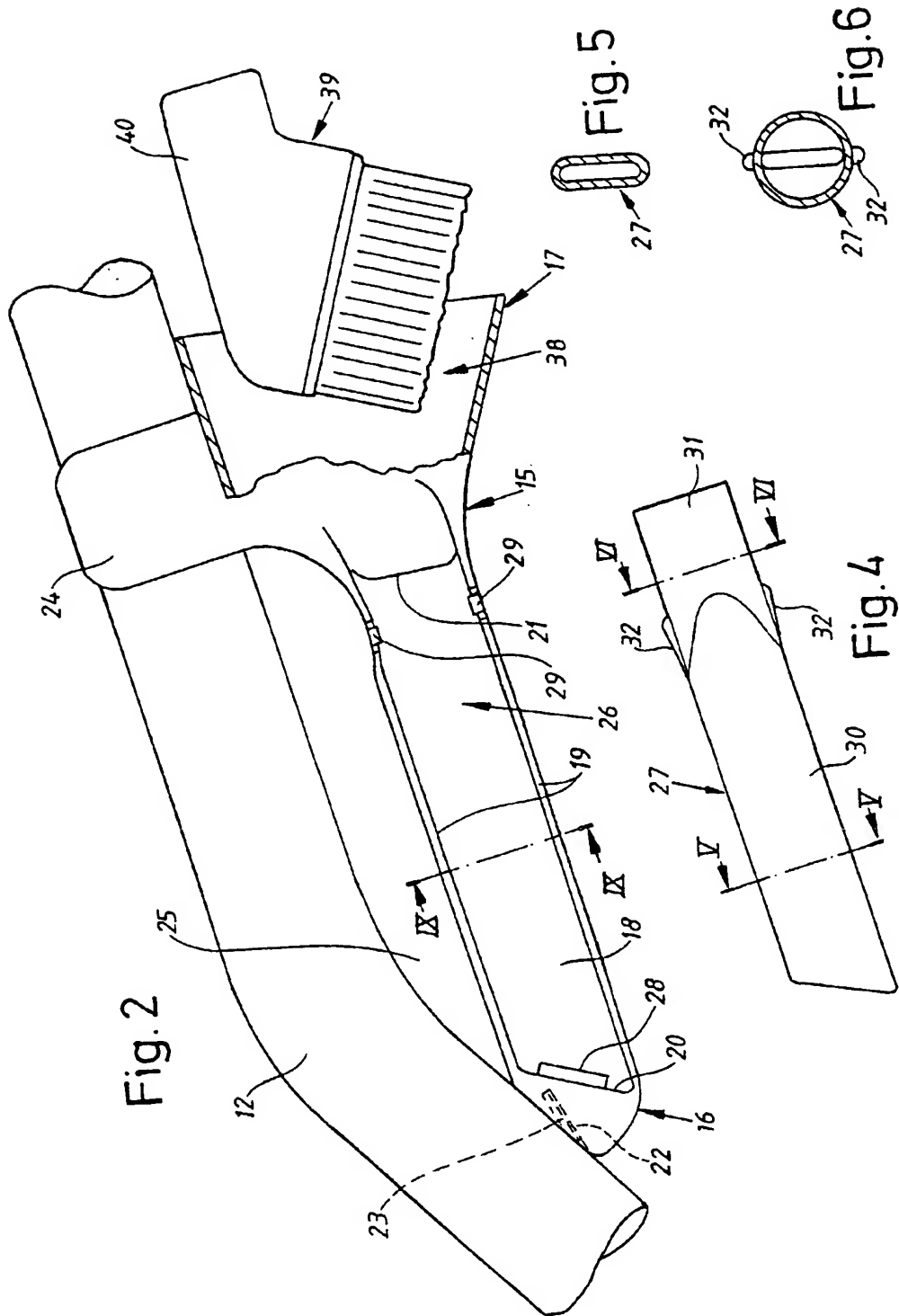
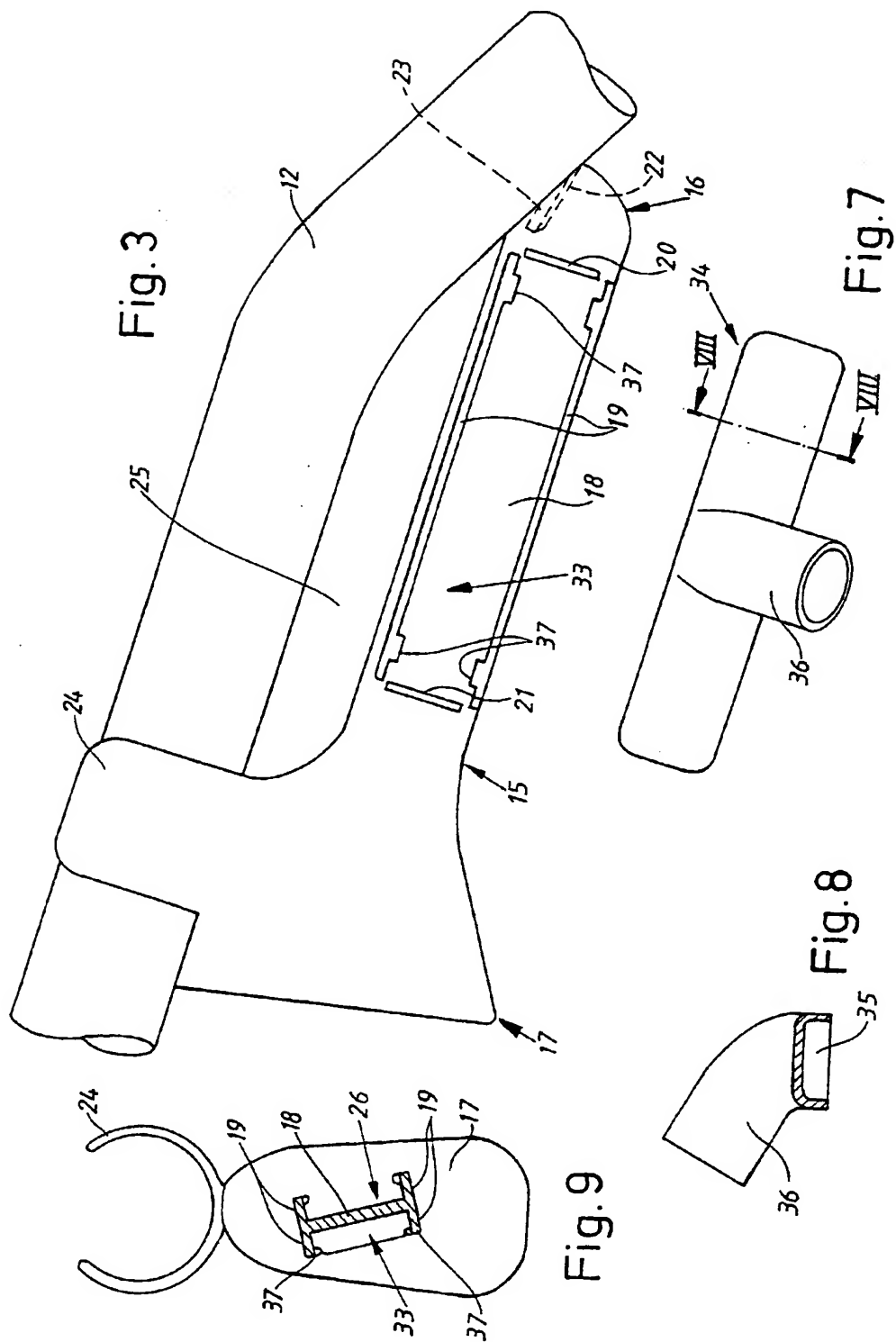


Fig.1







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EUROPEAN SEARCH REPORT

Application Number
EP 96 85 0102

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	DE-U-88 09 157 (LICENTIA PATENT-VERWALTUNGS-GMBH) * the whole document *	1-5,7-9	A47L9/00
X	DE-U-81 19 955 (BOSCH-SIEMENS HAUSGERAETE GMBH) * the whole document *	1-4	
A	US-A-5 303 447 (D.T. MCKNIGHT) * abstract *	1	
A	US-A-5 247 719 (R.A. WAREHAM & AL) * abstract *	1	
A	FR-A-750 883 (INVENTIA PATENT VERWERTUNGS) -----		
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			A47L
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 26 August 1996	Examiner Vanmol, M
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